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Notice of Allowability	Application No.	Applicant(s)	
	10/717,778	LOKE ET AL.	
	Examiner	Art Unit	
	Dac V. Ha	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to amendment filed on 05/02/07.
- 2. ☒ The allowed claim(s) is/are 1-25, renumbered as 1-25, respectively.
- 3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Dac V. Ha
 Primary Examiner
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Allowable Subject Matter

1. This office action is in response to the amendment filed on 05/03/07.
2. The following is a statement of reasons for the indication of allowable subject matter:

Applicant has amended claims 23-25 in accordance with the office dated 02/07/07. Upon further consideration, claims 23-25 are allowed. Claims 1-22 were previously allowed. Particularly, prior art of record (closest reference, Gomez – US 6,583,675), taking individually or collectively, fails to fairly teach method and apparatus of phase-locked loop including “a charge-pump loop filter configured to receive a first and a second update signal each having at least one state based on a phase difference between a first clock and a second clock, and comprising: a first component configured to adjust, during an update period, a voltage across an impedance from a reference level based on the states of the first and second update signals and to return the voltage across the impedance to the reference level prior to an end of the update period, wherein the voltage across the impedance comprises the first control voltage; and a second component configured to adjust a voltage across a capacitor based on the states of the first and second input signals, wherein the voltage across the capacitor comprises the second control voltage”, as claimed in independent claim 1 (claims 2-16 depend therefrom); “charge-pump loop filter configured to receive a first and a second update signal each having at least one state based on a phase difference between a first clock and a second clock, the charge-pump loop filter comprising: a first component configured to adjust, during an update period, a voltage across a first capacitor from a

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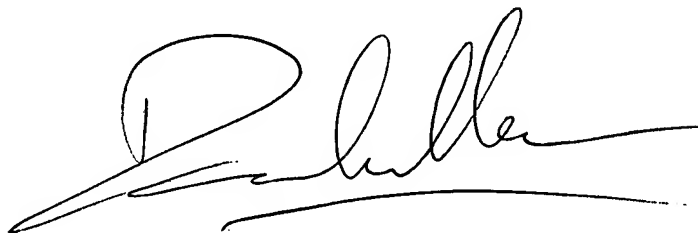
reference level based on the states of the first and second update signals and to return the voltage across the first capacitor to the reference level prior to an end of the update period, wherein the voltage across the first capacitor comprises the first control voltage; and a second component configured to adjust a voltage across a second capacitor based on the states of the first and second input signals, wherein the voltage across the second capacitor comprises the second control voltage", as claimed in independent claim 17 (claims 18-22 depend therefrom); and "receiving a first and second update signal each having at least one state based on a phase difference between a first clock and a second clock; providing the first control voltage having a level substantially proportional to the phase difference, including adjusting, during an update period, a voltage across an impedance from a reference level based on the states of the first and second update signals and to return the voltage across the impedance to the reference level prior to an end of the update period, wherein the voltage across the impedance comprises the first control voltage; and providing the second control voltage having a level substantially proportional to an integral of the phase difference clock", as claimed in independent claim 23 (claims 24-25 depend therefrom). Thus, claims 1-25 are found to be novel and unobvious over prior art of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 5/4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'D. Ha', with a long horizontal flourish extending to the right.

Dac V. Ha
Primary Examiner
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